

WHAT IS CLAIMED IS:

1. A computer network for generating instructions for use by photomask manufacturing equipment, comprising:

an interface computer accessible to a remote customer computer via a remote network connection, and during the network connection, the interface computer operable to perform the following tasks: receive photomask specification data from the customer computer, validate the photomask specification data, and download validation results to the customer computer;

wherein the photomask specification data at least identifies layers, patterns, placements, and fracturing data for at least one photomask;

a photomask specification database in communication with the interface computer, operable to store the photomask specification data;

a command generator in communication with the photomask specification database, operable to generate fracturing instructions and control instructions in response to the photomask specification data;

a customer design database that stores design data for the photomask; and

a fracture engine that receives the fracturing instructions and the design data and uses this data to generate fractured pattern data.

2. The network of Claim 1, wherein the remote network connection is an internet connection.

3. The network of Claim 1, wherein the customer design database has a communications interface for receiving design data from the customer in electronic form.

4. The method of Claim 3, wherein the design data is received during the same network connection as the photomask specification data.

5. The network of Claim 1, further comprising a billing data generator that selects billing data from the photomask specification data and arranges the billing data in a format suitable for a billing system.

6. The network of Claim 5, wherein the billing data generator arranges the billing data as a semi file.

7. The network of Claim 1, wherein the command generator is further operable to deliver the control instructions to memory accessible by the manufacturing equipment.

8. The network of Claim 1, wherein the fracture engine is further operable to deliver the fractured pattern data to memory accessible by the manufacturing equipment.

9. The network of Claim 1, wherein the fracturing instructions are in the form of a cinc file.

10. The network of Claim 1, wherein the interface computer validates the photomask specification data by determining whether data has been entered in a specified format.

11. The network of Claim 1, wherein the interface computer validates the photomask specification data by determining whether data complies with dimensional criteria.

12. The network of Claim 1, wherein the interface computer validates the photomask specification data by validating fracturing data.

13. A network-based method of generating instructions for use by photomask manufacturing equipment, comprising the steps of:

downloading a series of display screens to a customer computer via a remote network connection, each of the network screens operable to prompt the customer to enter photomask specification data;

wherein the photomask specification data at least identifies layers, patterns, placements, and fracturing data for at least one photomask;

receiving the photomask specification data from the customer computer via the remote network connection, at local computing equipment on a local network of the photomask manufacturer; and

using the local computing equipment to perform the following tasks: to validate the photomask specification data during the remote network connection; to generate fracturing instructions in response to the photomask specification data; to receive pattern design data from the customer; to use the fracturing instructions and the pattern design data to generate fractured pattern data; and to generate control instructions for the manufacturing equipment.

14. The method of Claim 13, wherein the remote network connection is an internet connection.

15. The method of Claim 13, wherein the local computing equipment receives the pattern design data from the customer in electronic form.

16. The method of Claim 15, wherein the design data is received during the same network connection as the photomask specification data.

17. The method of Claim 13, wherein the downloading step is further performed by downloading a screen operable to prompt the use to enter billing data, and further comprising the steps of arranging the billing data in a format suitable for a billing system, and delivering the billing data to the billing system.

18. The method of Claim 13, wherein the screens comprise at least a layer data screen and a pattern data screen and wherein the pattern data screen lists layers based on data provided to the layer data screen.

19. The method of Claim 13, wherein the screens comprise at least a layer data screen and a pattern placement screen and wherein the pattern placement screen lists layers based on data provided to the layer data screen.

20. The method of Claim 13, wherein the screens comprise at least a pattern data screen and a fracture screen, and wherein the fracture screen lists patterns based on data provided to the pattern data screen.

21. The method of Claim 13, wherein the local computing equipment further delivers the fractured pattern data and the control instructions to the manufacturing equipment.

22. The method of Claim 13, wherein the local computing equipment comprises an interface computer, a command generator, and a fracture engine, implemented on at least one computer.

23. The method of Claim 13, wherein the local computing equipment further generates a billing file for use by the manufacturer's billing system.

24. The method of Claim 13, wherein the local computing equipment validates the photomask specification data by determining whether data has been entered in a specified format.

25. The method of Claim 13, wherein the local computing equipment validates the photomask specification data by determining whether data complies with dimensional criteria.

26. The method of Claim 13, wherein the local computing equipment validates the photomask specification data by validating fracturing data.